

Title (en)  
EXHAUST GAS VOLUME DETERMINATION DEVICE

Title (de)  
ABGASVOLUMENBESTIMMUNGSVORRICHTUNG

Title (fr)  
DISPOSITIF POUR LA DÉTERMINATION DU VOLUME DE GAZ D'ÉCHAPPEMENT

Publication  
**EP 2483642 A1 20120808 (DE)**

Application  
**EP 10760666 A 20100928**

Priority  
• DE 102009043346 A 20090929  
• EP 2010064340 W 20100928

Abstract (en)  
[origin: WO2011039169A1] The invention relates to a system for determining exhaust gas volume for a stationary or mobile device, especially a boat, comprising: a plurality of Bragg gratings (5) distributed in pre-determined positions transversely to the direction (4) of flow of an exhaust gas in an exhaust gas channel (2) of the device; an optical wave guide structure (6) that consists of at least one optical wave guide (7) and in which the Bragg gratings (5) are embodied; a heating device (9) arranged adjacently to the Bragg gratings (5) and through which the Bragg gratings (5) are subjected to heat, or a cooling device arranged adjacently to the Bragg gratings, through which the Bragg gratings (5) can be subjected to cold; at least one light source (22) for irradiating light into the optical wave guide structure (6); and at least one signal processing device (23) which determines, from light backscattered from Bragg gratings (5) in the optical wave guide structure (6) against its original direction of diffusion, the speed of the flow of the exhaust gas along the course of the optical wave guide structure (6), and thereby deduces the exhaust gas volume flowing through the exhaust gas channel (2).

IPC 8 full level  
**G01F 1/688** (2006.01); **G01P 5/10** (2006.01); **G01P 5/26** (2006.01)

CPC (source: EP KR US)  
**G01F 1/688** (2013.01 - KR); **G01F 1/6884** (2013.01 - EP US); **G01P 5/10** (2013.01 - EP KR US); **G01P 5/26** (2013.01 - EP US)

Citation (search report)  
See references of WO 2011039169A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)  
**WO 2011039169 A1 20110407**; CN 102575953 A 20120711; CN 102575953 B 20160217; DK 2483642 T3 20131125;  
EP 2483642 A1 20120808; EP 2483642 B1 20130814; ES 2432317 T3 20131202; KR 101332923 B1 20131126; KR 20120056891 A 20120604;  
US 2012180548 A1 20120719; US 8875558 B2 20141104

DOCDB simple family (application)  
**EP 2010064340 W 20100928**; CN 201080043626 A 20100928; DK 10760666 T 20100928; EP 10760666 A 20100928; ES 10760666 T 20100928;  
KR 20127010823 A 20100928; US 201013498727 A 20100928